



SIMID 02-100 (Siemens Miniature Inductors)
European standard
Rated inductance 0,0082 to 100 μH
Rated current 0,065 to 0,8 A



Construction

- Size as per EIA standard: 1210
- Ceramic or ferrite core
- Winding laser-welded, flame-retardant encapsulation
- Temperature index of wire enamel: 180 °C

Features

- High Q factor
- High resonance frequency
- Suitable for reflow (IR and vapor phase) and wave soldering
- Different measuring frequencies for L and Q

Applications

- Filtering of supply voltages, coupling, decoupling
- Antenna systems
- Automotive electronics
- Telecommunications

Terminals

- Tinned
- Base material: CuSn6, 0,4 μm Cu, 0,1 μm Ni, 5–7 μm Sn
- Suitable for soldering and conductive adhesion
- No leaching during wave soldering

Marking

Marking on component:
Manufacturer,
 L value (in nH) and tolerance of L value (coded),
date of manufacture (coded)

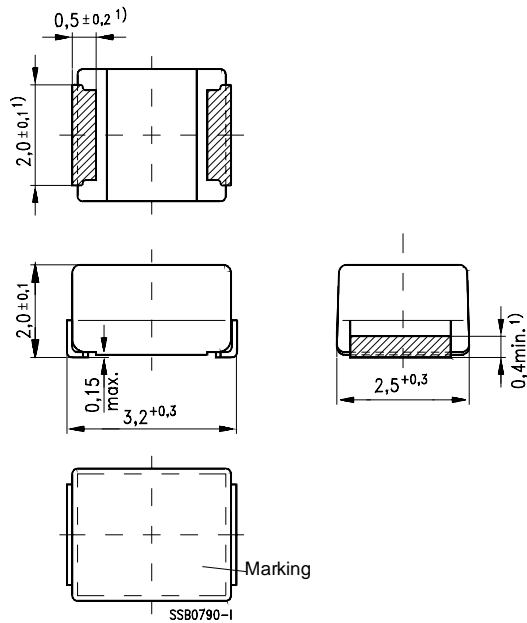
Minimum marking on reel:
Manufacturer, part number, ordering code,
 L value and tolerance of L value,
quantity, date of packing

Delivery mode

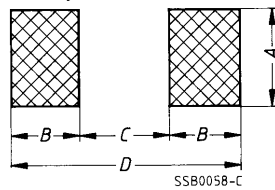
8-mm blister tape wound on 180-mm or 330-mm \varnothing reel
For details on taping, packing and packing units [see page 433](#).

Outline drawing

EIA size 1210,
approx. weight 50 mg



PCB layout recommendation



| Dimensions (mm) | A | B | C | D |
|------------------|-----|------|-----|-----|
| Wave soldering | 2,3 | 1,60 | 2,1 | 5,3 |
| Reflow soldering | 2,7 | 1,15 | 2,1 | 4,4 |

1) Soldering area, tinned

Characteristics and ordering codes

For further technical data [see page 54](#).

| L_R μH | Tolerance ¹⁾ | f_L MHz | Q_{\min} | f_Q MHz | I_R mA | R_{\max} Ω | $f_{\text{res, min}}$ MHz | Ordering code ²⁾ (180-mm \varnothing reel) |
|-------------------------|-------------------------|--------------|------------|--------------|-------------|------------------------|------------------------------|--|
| Core material: ceramics | | | | | | | | |
| 0,0082 | $\pm 5\%$ | 10 | 20 | 100 | 800 | 0,08 | 2500 | B82422-A3829-+100 |
| 0,010 | $\hat{=} J$ | 10 | 20 | 100 | 750 | 0,09 | 2500 | B82422-A3100-+100 |
| 0,012 | $\pm 10\%$ | 10 | 25 | 100 | 700 | 0,10 | 2500 | B82422-A3120-+100 |
| 0,015 | $\hat{=} K$ | 10 | 27 | 100 | 640 | 0,12 | 2500 | B82422-A3150-+100 |
| 0,018 | $\pm 20\%$ | 10 | 30 | 100 | 640 | 0,12 | 2500 | B82422-A3180-+100 |
| 0,022 | $\hat{=} M$ | 10 | 30 | 100 | 600 | 0,14 | 2500 | B82422-A3220-+100 |
| 0,027 | | 10 | 23 | 50 | 600 | 0,14 | 1850 | B82422-A3270-+100 |
| 0,033 | | 10 | 20 | 50 | 540 | 0,17 | 1700 | B82422-A3330-+100 |
| 0,039 | | 10 | 25 | 50 | 530 | 0,18 | 1450 | B82422-A3390-+100 |
| 0,047 | | 10 | 26 | 50 | 510 | 0,19 | 1350 | B82422-A3470-+100 |
| 0,056 | | 10 | 26 | 50 | 500 | 0,20 | 1200 | B82422-A3560-+100 |
| 0,068 | | 10 | 27 | 50 | 480 | 0,21 | 1150 | B82422-A3680-+100 |
| 0,082 | | 10 | 27 | 50 | 450 | 0,24 | 1050 | B82422-A3820-+100 |
| 0,10 | | 10 | 25 | 50 | 440 | 0,26 | 1000 | B82422-A3101-+100 |
| 0,12 | | 1 | 22 | 30 | 400 | 0,32 | 880 | B82422-A3121-+100 |
| 0,15 | | 1 | 25 | 30 | 390 | 0,33 | 850 | B82422-A3151-+100 |
| 0,18 | | 1 | 25 | 30 | 360 | 0,38 | 800 | B82422-A3181-+100 |
| 0,22 | | 1 | 25 | 30 | 280 | 0,64 | 700 | B82422-A3221-+100 |
| 0,27 | | 1 | 20 | 30 | 235 | 0,90 | 650 | B82422-A3271-+100 |
| 0,33 | | 1 | 22 | 30 | 200 | 1,3 | 580 | B82422-A3331-+100 |
| 0,39 | | 1 | 22 | 30 | 190 | 1,4 | 540 | B82422-A3391-+100 |
| 0,47 | | 1 | 22 | 30 | 150 | 2,2 | 480 | B82422-A3471-+100 |
| 0,56 | | 1 | 22 | 30 | 150 | 2,2 | 400 | B82422-A3561-+100 |
| 0,68 | | 1 | 22 | 30 | 145 | 2,4 | 180 | B82422-A3681-+100 |
| 0,82 | | 1 | 22 | 30 | 140 | 2,5 | 160 | B82422-A3821-+100 |

1) Closer tolerances and special versions upon request.

2) Replace the + by the code letter for the required inductance tolerance
For reel size $\varnothing 330$ mm append code number "8". Example: B82422-A3829-K108

Characteristics and ordering codes

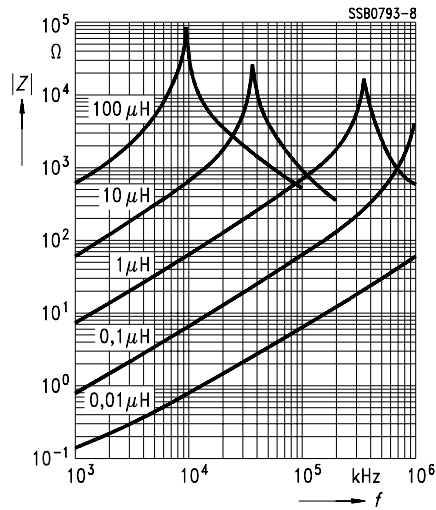
For further technical data [see page 54](#).

| L_R μH | Tolerance ¹⁾ | f_L MHz | Q_{min} | f_Q MHz | I_R mA | R_{max} Ω | $f_{res, min}$ MHz | Ordering code ²⁾ (180-mm Ø reel) |
|------------------------|-------------------------|--------------|-----------|--------------|-------------|----------------|-----------------------|--|
| Core material: ferrite | | | | | | | | |
| 1,0 | ± 5 % | 1 | 20 | 7,96 | 380 | 0,34 | 320 | B82422-A1102-+100 |
| 1,2 | ± J | 1 | 20 | 7,96 | 370 | 0,37 | 300 | B82422-A1122-+100 |
| 1,5 | ± 10 % | 1 | 20 | 7,96 | 340 | 0,42 | 270 | B82422-A1152-+100 |
| 1,8 | ± K | 1 | 25 | 7,96 | 290 | 0,60 | 250 | B82422-A1182-+100 |
| 2,2 | ± 20 % | 1 | 25 | 7,96 | 270 | 0,75 | 125 | B82422-A1222-+100 |
| 2,7 | ± M | 1 | 25 | 7,96 | 240 | 0,88 | 110 | B82422-A1272-+100 |
| 3,3 | | 1 | 27 | 7,96 | 200 | 1,20 | 110 | B82422-A1332-+100 |
| 3,9 | | 1 | 27 | 7,96 | 190 | 1,40 | 110 | B82422-A1392-+100 |
| 4,7 | | 1 | 27 | 7,96 | 150 | 2,20 | 110 | B82422-A1472-+100 |
| 5,6 | | 1 | 27 | 7,96 | 140 | 2,60 | 100 | B82422-A1562-+100 |
| 6,8 | | 1 | 27 | 7,96 | 135 | 2,80 | 90 | B82422-A1682-+100 |
| 8,2 | | 1 | 27 | 7,96 | 130 | 3,00 | 90 | B82422-A1822-+100 |
| 10 | | 1 | 27 | 2,52 | 180 | 1,60 | 25 | B82422-A1103-+100 |
| 12 | | 0,1 | 27 | 2,52 | 175 | 1,65 | 23 | B82422-A1123-+100 |
| 15 | | 0,1 | 27 | 2,52 | 165 | 1,85 | 20 | B82422-A1153-+100 |
| 18 | | 0,1 | 27 | 2,52 | 155 | 2,00 | 17 | B82422-A1183-+100 |
| 22 | | 0,1 | 27 | 2,52 | 140 | 2,65 | 16 | B82422-A1223-+100 |
| 27 | | 0,1 | 27 | 2,52 | 120 | 3,70 | 15 | B82422-A1273-+100 |
| 33 | | 0,1 | 27 | 2,52 | 105 | 4,50 | 13 | B82422-A1333-+100 |
| 39 | | 0,1 | 27 | 2,52 | 90 | 6,30 | 12 | B82422-A1393-+100 |
| 47 | | 0,1 | 27 | 2,52 | 85 | 7,00 | 11 | B82422-A1473-+100 |
| 56 | | 0,1 | 27 | 2,52 | 85 | 6,75 | 9 | B82422-A1563-+100 |
| 68 | | 0,1 | 27 | 2,52 | 80 | 7,70 | 9 | B82422-A1683-+100 |
| 82 | | 0,1 | 27 | 2,52 | 70 | 10,0 | 8 | B82422-A1823-+100 |
| 100 | | 0,1 | 27 | 2,52 | 65 | 11,5 | 7 | B82422-A1104-+100 |

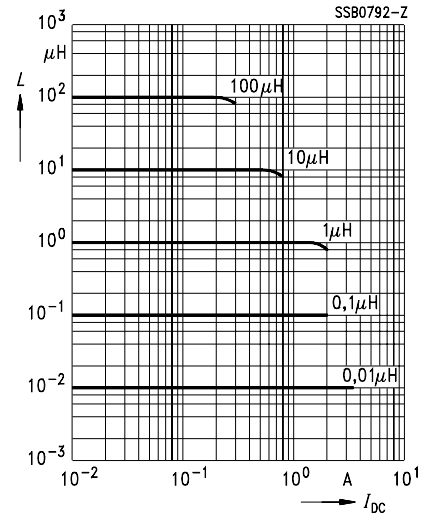
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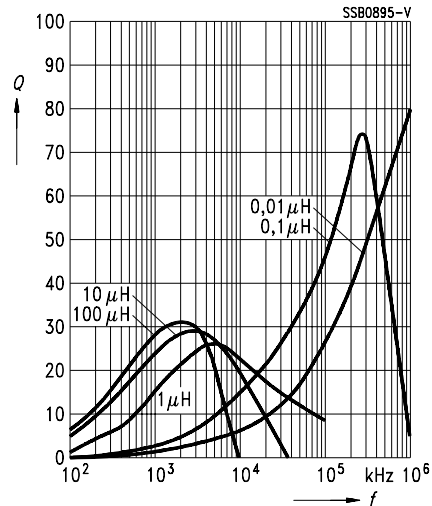
Impedance $|Z|$
versus frequency f
measured with impedance analyzer
HP 4191A / HP 4194A



Inductance L
versus dc load I_{DC}
measured with LCR meter HP 4275A



Q factor
versus frequency f
measured with impedance analyzer
HP 4191A / HP 4194A



Current derating I_{op}/I_R
versus ambient temperature T_A
(Rated temperature $T_R = 105^\circ\text{C}$)

